



Grade Level: 3-5

Essential Skills: 1, 9

NGSS: 3-LS3-2, 4-LS1-1

CCSS: 3.RL.1, 4.RL.1, 5.RL.1, 3.L.6, 4.L.6, 5.L.6, 3.SL.2, 4.SL.2, 5.SI.2

Time: 60 minutes

Materials:

- The Basic Parts of a Flower Worksheet. Glossary and Choice Board
- Materials needed for Flower model from Choice Board, depended on student's choice

[AITC Library Resources:](#)

More Lessons:

Garden in a Glove

Lesson Adapted from:



Lesson to Grow

The Perfect Flower

Description:

Students will explore external anatomical parts of a flower and the key principles of Pollination.

Directions:

Part I: The Basic Parts of a Flower

1. Provide students with a copy of the *Basic Parts of a Flower* handout, have them read through the information on plants.
2. Each time the handout discusses a flower part, have students find it on their diagrammed flower and label it. They will need this information for the next activity.
3. After completing the reading, review the following questions:
What is the male part of the plant called?
What two parts make up the stamen?
What is the female part of the plant called?
What two parts make up the pistil?
What part of the female plant receives the pollen?
What part of the plant produces the pollen?
What part of the plant becomes seeds?
What does it mean to have a perfect flower?

Part II: Flower Model Choice Board

Students will work to create a model of a flower, then label it with the correct anatomical features they learned in the previous section. The choice board provides students the opportunity to determine how they would like to create the model and allows for flexibility in the materials they have to work with.



The Basic Parts of a Flower

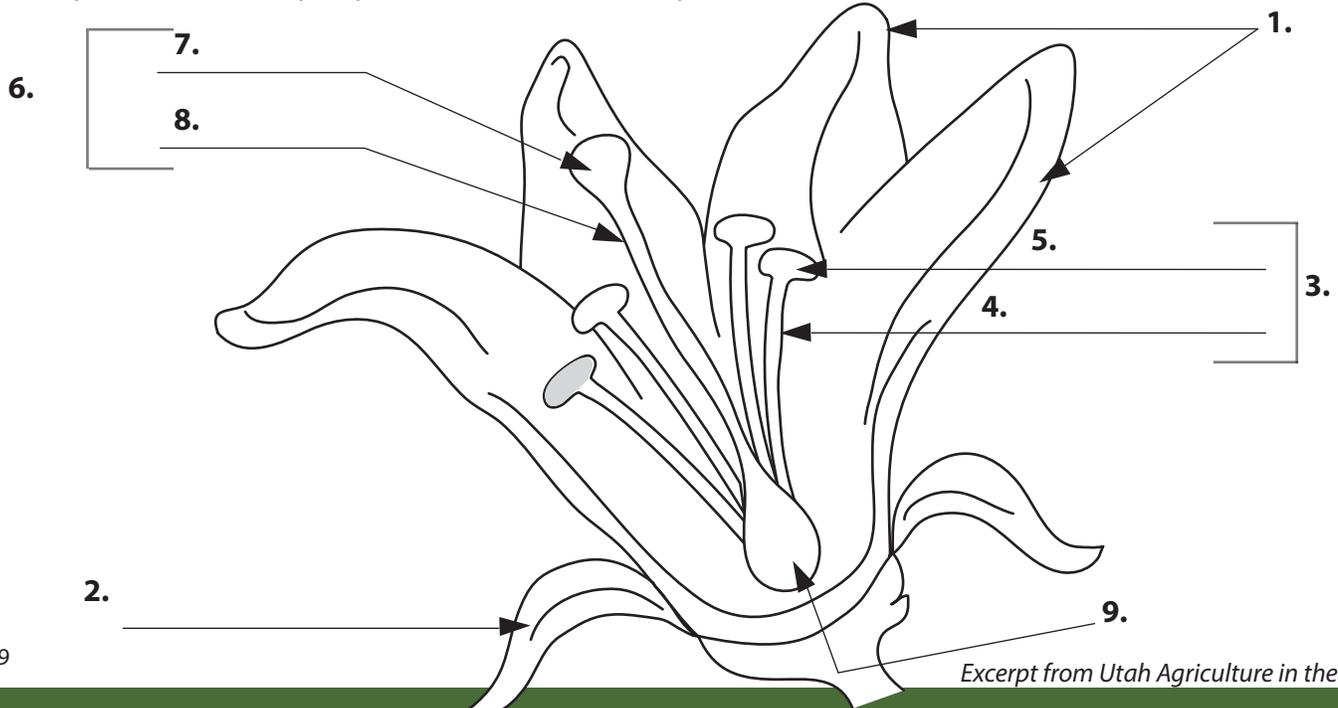
A flower is made up of many different parts. The sepal and petals are usually easy to see. The **petals** are the colorful, often bright part of the flower. Colorful petals attract pollinators and are usually the reason why we buy and enjoy flowers. Locate and label the petals on the diagram below marked by number one. The **sepals** look like little green leaves growing at the base of the petals. The sepals enclose and protect the developing flower bud before it opens up into a fully developed flower. Find the sepals on the diagram below marked by number two and label it. Flowers contain the reproductive system of the plant, and some of the most important parts of a flower are the male and female parts that carry the traits the parent plant will pass on to its offspring.

The male part of the flower is called the **stamen**. The stamen is located at number three, find and label stamen on the diagram. The stamen is the pollen producing part of the plant, and it is made up of two parts: the anther and filament. The **filament** is the stalk that holds the anther and attaches it to the flower. Locate and label filament marked by number four. The **anther** produces and holds the pollen, which will hopefully be transported to the female part of the flower by wind, animals, or insects. On the diagram, the anther is represented by number five, find and label it.

The female part of the flower is called the **pistil**, and it is made up of the stigma, style, and ovary. Find the pistil on the flower marked by the number six and label it. The **stigma** is the head of the pistil; it often looks like a sticky bulb on a long stalk in the center of a flower. The stigma receives the pollen grains. Locate the stigma, it's labeled number seven. The **style** is the stalk that the stigma sits on top of, and the ovary is usually at the base of the style. Find the style marked by number eight and the **ovary** marked by number nine, label both.

When a plant is pollinated, the pollen that has landed on the stigma grows a tube that reaches down through the style to the ovary. If pollen from an incompatible plant of a different species lands on the stigma, it won't grow a pollen tube. When the pollen tube reaches the ovary, the ovules inside the ovary can be fertilized by the pollen. Then the ovules become seeds, and the ovary swells. Seeds can be sown to grow new plants, and they can also be important food sources. We eat the seeds of wheat, corn, beans, and many other plants. We also eat many fruits, which are enlarged ovaries that contain the seeds of the plant.

Some flowers are perfect, meaning they have both male parts and female parts in the same flower. Roses, lilies, and dandelions have perfect flowers. Other flowers are imperfect, meaning each flower has either all male parts or all female parts. Cucumbers, pumpkins, and melons have imperfect flowers.





Student Instructions

The Perfect Flower

Today, we will be exploring parts of a flower and parts needed for a flower to be considered perfect. Follow the directions below to begin!

Part I: The Basic Parts of a Flower

1. On page 2, you will find a of the Basic Parts of a Flower handout, read through the information on plants.
2. Each time the handout discusses a flower part, find it on the flower diagram below on the page and label it. This information will be helpful to you in the next portion of the activity.

3. After completing the reading, answer the following questions:

What is the male part of the plant called?

What two parts make up the stamen?

What is the female part of the plant called?

What two parts make up the pistil?

What part of the female plant receives the pollen?

What part of the plant produces the pollen?

What part of the plant becomes seeds?

What does it mean to have a perfect flower?

Part II: Flower Model Choice Board

Create a model of a perfect flower, then label it with the correct parts. The choice board on page 3 provides you with options to create the flower model.



Glossary of Flower Parts

Anther -- the bright sac that produces and contains the pollen grains

Filament -- the stalk that supports the anther

Ovary -- the base of the female portion of the flower containing the seeds

Petals -- the colorful, thin structures that surround the pollination parts of the flower

Pollen grains -- the powdery particles that contain the male portions of the flower; also a nutritious, protein-rich food for bees

Sepal -- commonly green, leaf-like structures that protect the bud prior to opening

Stigma -- sticky surface where the pollen lands and eventually travels down toward the ovary

Style -- the narrow region of the pistil between the stigma and the ovary

The **Stamen** or male part of the flower includes the anther and filament.

The **Pistil** or female part of the flower includes the stigma, style, and ovary.

Flower Model Choice Board

Create a model of a perfect flower using one of the options below. Make sure to check that you have the supplies needed to complete the project before you begin!

Option 1:

Create your own drawing of a perfect flower, make sure to include all the necessary parts of a perfect flower. Label each part and include color!

Option 2:

Construct a model of a perfect flower using clay or play dough, label the nine parts of the flower. Take a picture and submit it to you teacher.

Option 3:

Create an origami model of a perfect flower(instructions included). Label the nine parts and take picture to present to your teacher.

Option 4:

Create a model of a perfect flower using items you have around the house. Be sure to label the nine parts and take a picture to present to your teacher.



Activity Page - Answer Key

The Basic Parts of a Flower

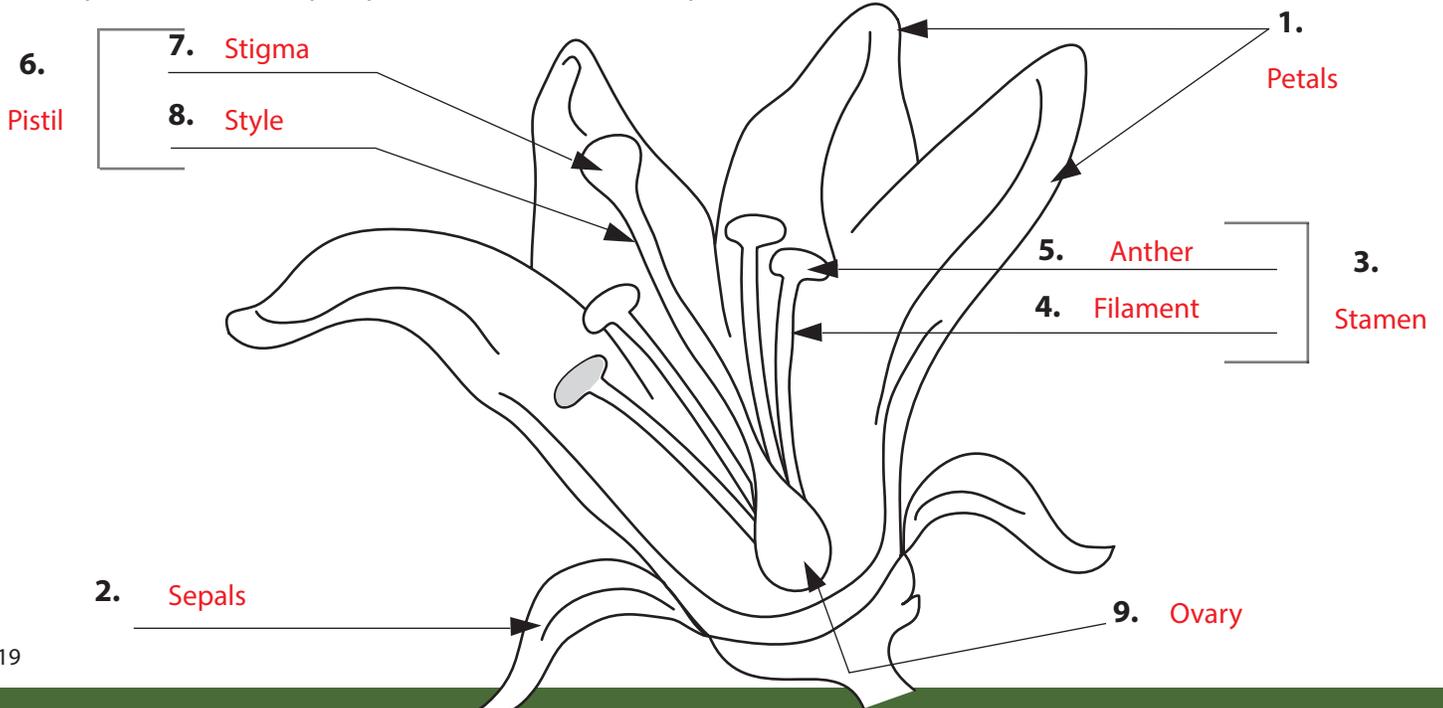
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Student Instructions- Answer Key

The Perfect Flower

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3. After completing the reading, answer the following questions:

What is the male part of the plant called?

Stamen

What two parts make up the stamen?

Anther and Filament

What is the female part of the plant called?

Pistil

What two parts make up the pistil?

Stigma and Style

What part of the female plant receives the pollen?

Stigma

What part of the plant produces the pollen?

Anther

What part of the plant becomes seeds?

Ovules

What does it mean to have a perfect flower?

Flower contains both female and male parts.

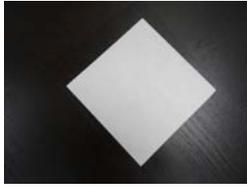
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Origami Flower Instructions

Student Folding Instructions

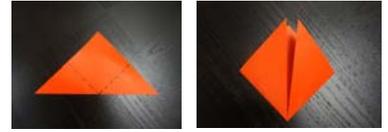
1. Arrange the origami paper on a flat surface, color side down, with one corner pointing at you.



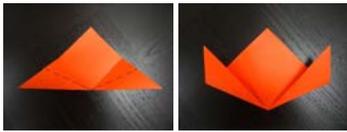
2. Fold the paper in half by bringing the bottom corner up to meet the top corner.



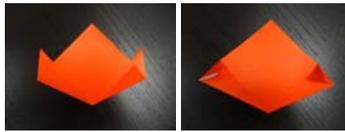
3. Fold the bottom right and left corners to the top corner. Crease and unfold.



4. Fold both the bottom left and right lines to meet the crease you made in step 3.



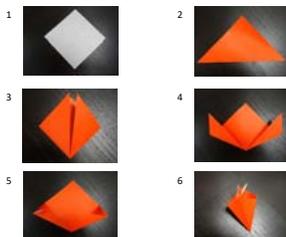
5. Flip the paper over. Fold the triangular tabs forward. Crease and unfold.



6. Flip the paper over. Use a glue stick to glue the right and left bottom triangles together. This completes one section.



7. Repeat steps 1-6 to make a total of four or five sections.



8. Join the sections together by gluing the flat triangles together.

